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Professional Clinicians' Views and Use of DC: 0-3R

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Professional Clinicians' Views and Use of DC: 0-3R

Submitted by Jennifer L. Chasco

May, 2012

MSW Clinical Research Paper

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present their findings. This project is neither a Master's thesis nor a dissertation.

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Abstract

In 1996, the *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood* was published to address the paucity of options for addressing infant and toddler mental health. Currently in its revised version and referred to as DC: 0-3R, it is designed to help professionals formulate a comprehensive assessment of infant and toddler mental health and relational issues. This paper addresses current research on infant and toddler mental health, the importance of prevention and early intervention, and the role of DC: 0-3R in these areas. Since professional perspective can ultimately influence the diagnostic process, this study focuses on the views and uses of professionals using DC: 0-3R. This is accomplished through the use of a qualitative study during which ten professionals were asked interview questions focusing on their training and experience, how they use the tool, and their thoughts of the tool. The data collected from these interviews is described and compared to other research on DC: 0-3R and infant and toddler mental health.

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Professional Views of DC: 0-3R

The historical understanding of and reaction to mental health has been widely varied and has often resulted in more harm than good. Madhouses, lobotomies, and unethical research, once widely practiced, are now viewed as inhumane. Time and ethical research have resulted in new treatments such as medication and psychotherapy, which although imperfect are indisputably an improvement over historical approaches. People who have mental health symptoms receive more professional and personal support than was previously afforded. However, there is still progress to be made. An internet search of the term mental health on thesaurus.com shows no synonyms, while mentally ill results in terms such as crazy, lunatic, deranged, nuts, and psycho (Mental health, n.d., Mentally ill, n.d.). Current issues extend past the terms being used. People with mental health symptoms frequently struggle to get treatment either due to not having insurance or the insurance limiting what they will cover (Treloar, 2010). Furthermore, services are usually based on diagnoses and if an adult or a child is incorrectly diagnosed or does not meet the criteria for diagnosis the supports available can be severely limited. Considering these current limitations it is important that professionals can improve not only treatments, but the system used to diagnosis not only adults, but children as well.

The current standard for diagnosing an adult or older child with a mental health disorder is through using the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, typically referred to as the DSM IV-TR (2000). Reviewing the title of the manual shows that this text supersedes several other versions with the original being published in 1952 and a fifth edition is expected to be released soon. Continual assessment of the validity and the reliability of this tool has led to an

expanded knowledge base in terms of identifying, diagnosing, and responding to mental health needs. There are five axes involved in a comprehensive diagnosis in which a clinician pays “attention to the various mental disorders and general medical conditions, psychosocial and environmental problems, and level of functioning that might be overlooked if the focus were on assessing a single presenting problem” (Diagnostic and Statistical Manual of Mental Disorders, 4th Ed. Text Revision, 2000, p 27). Professionals using this tool benefit from having a standardized method to evaluate presenting symptoms and influences in the lives of adults and older children. Professionals have widely accepted the DSM IV-TR as a method for diagnosing mental health in adults and older children, yet it does not address the mental health needs of young children adequately.

The belief that children are just little adults is no longer supported, but children’s uniqueness is not fully accounted for in current mental health practices. Infants and toddlers alternate between crying and being content frequently throughout the day. Their cries communicate that they are hungry, tired, wet, or need interaction and they are responded to by trial and error until the crying stops. In contrast, when an adult intermittently cries throughout each day it indicates a possible issue such as depression or grief. Adults are responded to by asking what is wrong or how can they be helped. They are often referred to a therapist or psychiatrist. Most mental health diagnoses and treatments are based on adult symptoms and adults’ abilities to respond (Evangelista & McLellan, 2004). Since infants and toddlers have limited abilities to respond verbally and their behaviors and reactions serve different functions based on their internal

experience, it is necessary to understand and respond to them differently than adults and older children (Vallotton, 2008). Recently professionals have begun to acknowledge this.

Until recently, there was no standardized method for professionals to diagnose infants and toddlers. To address this inadequacy in the mental health field the *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood* was published in 1996 and subsequently revised. Referred to as the DC: 0-3R (Zero to Three, 2005), it is a current tool being used by infant and toddler mental health professionals. The criteria review symptoms and behaviors through the scope of what is developmentally appropriate for the child's age as well as evaluates what is occurring within the context of their relationships (Evangelista & McLellan, 2004). Since the criteria are still in their own infancy, understanding how this new resource is used and how professionals in outpatient or community mental health settings interpret it can help guide further revisions and trainings to enable professionals using DC: 0-3R to formulate the most accurate diagnoses and subsequent interventions. For this reason, this study reviewed strengths and limitations of the tool found in the literature as well as evaluated how a sample of professionals views the process and implications of using DC: 0-3R to assess infants and toddlers.

Literature Review

Professionals use a myriad of assessment tools when doing clinical work and it is important to recognize that each of these tools is unique. DC: 0-3R can be better understood by reviewing the sections of the tool itself and identifying how it correlates to DSM IV-TR. After evaluating the tool itself, there are several other pertinent topics to explore. The literature review therefore focused not only on DC: 0-3R, but also factors in the assessment process, information on diagnosing young children, and early intervention and prevention.

DC: 0-3R

To better review strengths, weaknesses, and implications of DC: 0-3R requires a broad understanding of the tool itself. DC: 0-3R is the revised version to the initial DC: 0-3 that was published in 1994. The original DC: 0-3 was created by a multidisciplinary task force to create a standard diagnostic tool to use with infants and children (Zero to Three, 2005). As with any diagnostic tool, experts may help create the initial tool, but continued examination of the tool allows for subsequent versions to increase the accuracy of the original creation. After initial publication, DC: 0-3 was researched so it could be improved. As a result, DC: 0-3R was published in 2005 to address several inadequacies present in the first version (Zero to Three, 2005). Overall, DC: 0-3R aims to provide a standardized diagnostic tool and assessment process to increase how potential early mental health issues in early childhood are understood and addressed by professionals (Zero to Three, 2005). One important factor in the creation process of DC: 0-3, and subsequently DC: 0-3R, is the influence of the DSM IV.

The primary tool used for diagnosis of mental health issues is the DSM IV-TR. However, the DSM IV-TR is designed for use with older children and adults and “DSM

IV diagnoses that are indicative in pathology in older children or adults often overlap with normal behavioral patterns for infants, toddlers, and preschoolers” (Evangelista & McLellan, 2004, p. 162). For this reason, the DSM IV-TR does not appear to sufficiently address the needs of infant and toddler mental health. However, there are several components within DSM IV that are used in the DC: 0-3R. Initially DC: 0-3, and now DC: 0-3R utilizes a multi-axial system similar to that of the DSM IV-TR. It also allows the multi-axial system to cross over to be compatible with the DSM for most diagnoses (Zero to Three, 2005). In contrast to the DSM IV-TR, DC: 0-3R places equal importance to all five axes (Guedeney et al., 2003). Although the use of the multi-axial system is similar to that of the DSM IV-TR there are distinctions between the axes in the two diagnostic manuals.

The goal of DC: 0-3R was to create developmentally appropriate criteria for infants and toddlers by starting using typical development as a baseline to identify pervasive deviations in development. While the DSM IV-TR does have a diagnosis for disorder of childhood, NOS the DC: 0-3R diagnosis gives further detail into what the issue is for a young child. For the DC: 0-3R, the infant or toddler’s primary diagnosis is described on Axis I. Several of the primary diagnoses are disorders also found in the DSM IV-TR such as posttraumatic stress disorder, anxiety disorders and mood disorders. The DC: 0-3R takes these DSM IV-TR diagnoses and provides criteria more developmentally appropriate to infants and toddlers (Zero to Three, 2005). For example, one of the criteria for major depression indicates that a child may express “inappropriate guilt in play” (Zero to Three, 2005, p26). There are several other infant and toddler diagnoses found in DC: 0-3R such as deprivation/maltreatment, hyper or hyposensitive, and multisystem development disorder. Although there are a variety of disorders found on Axis I, the DC: 0-3R criteria also has a code for inclusion of disorders from DSM IV-

TR or ICD 10 (Zero to Three, 2005). Although Axis I is where the primary diagnosis is listed there are several other components included in a DC: 0-3R diagnosis.

Axis II focuses primarily on the infant or toddler's relationship with others. This is accomplished through the use of two tools outlined in the DC: 0-3R. These tools are the Parent-Infant Relationship Global Assessment Scale (PIR-GAS) and the Relationship Problems Checklist (RPCL) (Zero to Three, 2005). By using a scale of 100, the PIR-GAS evaluates the relationship between the parent and child. The higher a score the more adaptive the relationship, while a lower score indicates some level of dysfunction in the relationship (Zero to Three). The RPCL determines the quality of a parent-child relationship by reviewing several characteristics based on guidelines set forth by the checklist. Level of involvement including anxious or under involvement, presence of abuse, anxiety, and anger in the relationship are all evaluated (Zero to Three). The goal of assessing the relationship is built upon the premise that infants and toddlers are dependent on the relationships with their caregivers to help guide them as they development and learn social skills. The child's world view begins to develop based on early relationships including how they are responded to or how they learn to respond to get what they need. Early issues can interfere with healthy development and identifying those issues early on can help the caregiver and the child improve their relationship (Zero to Three, 2005). The importance of relationships is one that is taken into consideration in Axis II, and Axis III considers medical or developmental conditions that the child may have.

Axis III is where a clinician should take into account any medical and developmental disorders and conditions. Although the DC: 0-3R information presented on Axis III is brief, it is important to review to enhance understanding of potential medical or developmental conditions that could influence the child or treatment (Zero to Three, 2005). However, it is not the only consideration. The impact of medical

conditions on infants and toddlers can result in the presence of psychiatric symptoms (Zero to Three). For instance, symptoms of endocrine disorders can present similarly to those of mood disorders. Therefore formulating a mental health diagnosis for an infant or toddler should include ruling out the possibility of a medical problem causing the symptoms (Zero to Three). The assessment process includes identifying potential medical or developmental issues to help create a better picture of what factors influence the child; so does assessing psychosocial stressors.

Axis IV evaluates the presence of psychosocial stressors in the life of the infant or toddler (Evangelista & McLellan, 2004). Psychosocial stressors can be on-going, brief, typical or atypical. Some examples of on-going stressors can include exposure to violence or abuse and living in poverty. More typical stress can often result from transitions in the child's life such as starting daycare or the birth of a new sibling (Zero to Three, 2005). To help the clinician assess as many stressors as possible there is a checklist provided in the text that reviews a variety of stressors in ten main areas of the child's life (Zero to Three). Having a better understanding of the stress in an infant or toddler's life is the fourth of five axes used by DC: 0-3R.

Axis V reviews emotional and social functioning which rates "the young child's expression of affects, cognition, and interactions" (Evangelista & McLellan, 2004. p. 163). The following categories are evaluated when determining the infant or toddler's social or emotional functioning; attention and regulation, forming relationships or mutual engagement, intentional two-way communication, complex gestures and problem solving, use of symbols to express thoughts and feelings, and connecting symbols logically and abstract thinking (Zero to Three, 2005). Each of these areas is elaborated on in the DC: 0-3R to help identify what a clinician would look for when determining a child's progress in one area. Infants and toddlers are anticipated to grow in each of these areas as they age and the clinician should be assessing if the child is gaining skills in each

of these areas at a developmentally appropriate level (Zero to Three). Axis V is the last category in DC: 0-3R and the culmination of the five axes creates a broader understanding of factors that can influence infant and toddler mental health.

With previous inadequacies in diagnosing infant and toddler mental health issues, DC: 0-3R has created criteria to improve the assessments of such young children. The similarity between DC: 0-3R and DSM IV-TR was purposeful with the intent of the tools being used in conjunction to one another. The assessment and diagnosis takes a variety of factors into account when determining any potential issues in infants and toddlers. DC: 0-3R was created to address inadequacies in field of infant and toddler mental health, and there are several factors to consider when completing an assessment of an infant or toddler.

Factors in Assessment Process

Although DC: 0-3R provides a framework for assessing and diagnosing infants and toddlers, there are several significant factors that must be taken into account. These factors include information about and from the child, the family, caregivers (Weston et al., 2003) and the professional (Ben-Sasson et al., 2007). Outcomes of evaluations are influenced by presenting issues, severity of those issues, and age of the client, and other psychosocial contexts (Weston et al, 2003). Without taking these factors into consideration there is the potential of misinterpreting or missing important information. Since the child is the primary focus of the assessment it is important to consider any factors that may influence how the child is assessed.

Children's expression of symptoms, internal experience and limited verbal capacity require the professional completing the assessment to be able to understand child development and demonstration of symptoms. Evangelista and McLellan (2004) observed that typical child and infant behaviors resemble what would be characterized as pathological behaviors in adults and older children. Anna Freud (1965) referred to "developmental lines" which require, "psychopathology to be defined through comparisons with average developmental functioning" (Freud, 1965 as cited by Sturner, et al., 2007). The importance of understanding typical development in order to recognize atypical development is a framework that is continued in DC: 0-3R (Sturner, et al., 2007). This is evidenced by the fact that the DC: 0-3 draws from existing knowledge bases, particularly the DSM IV, "while replacing some constructs and diagnoses with more developmentally sensitive parameters" (Evangelista & McLellan, 2004, p. 163). The DC: 0-3R provides criteria for specific diagnoses and frequently provides examples of how a child would exhibit that specific criterion. One of the criteria for Posttraumatic Stress Disorder requires preoccupation or recurrent and intrusive thoughts and the example provided explains that toddlers might frequently talk about dogs or incorporate dogs into their play time after being bitten by a dog (Zero to Three, 2005). There appears to be consensus that developmental considerations are essential, yet the challenge of assessing an infant or toddler with limited verbal abilities has not yet been adequately addressed.

Based on the premise that young children are unable to verbalize and express themselves as adults and older children can, it is pertinent to understand how diagnostic assessments can be accurately completed. It is important to consider that although infants and toddlers have limited verbal communication, they do possess other forms of

intentional communication such as object representation or gesturing which are eventually replaced by verbal communication (Vallotton, 2008). Infants and young children also develop what is known as expressive communication which refers to “gazing at caregivers, gesturing, and babbling” (Crais & Roberts, 1996, Walker, Greenwood, Hart, & Carta, 1994 as cited by Luze et al, 2001). One case study followed a 12.5 month old girl who not only responded to symbolic gestures, but created 13 symbolic gestures of her own. This study was expanded and similar results were found with other children, all of whom used symbolic gestures until they developed language skills (Acredolo & Goodwyn, 1985 as cited by Vallotton, 2008). Vallotton (2008) filmed infants and toddlers in a child care setting approximately 1% of the time over a several month span and found that approximately half of the children in a daycare were observed using a feeling or emotion gesture. Although these studies help verify that pre-verbal children can communicate accurately, there are still limitations in what a child is able to intentionally share and understand.

Since children have limited verbal abilities, observing their behaviors and interactions is an important part of the assessment process. The DC: 0-3R assessment process requires that the clinician meet with the family for at least three to five forty-five minute sessions before forming a diagnosis so that all six areas of development, relationships, strengths and limitations are assessed (Zero to Three, 2005). It is not only the length of time the clinician needs to consider, but the location of the meetings. Infants and toddlers often struggle to exhibit their usual behaviors when in new situations or when meeting with new people, and using an environment known to the child helps encourage what is known as authentic behaviors (Luze et al., 2005). Therefore, meeting

with a family in their home is ideal for an assessment, but office based assessments are more likely. These limitations result in professionals needing to rely on more information than can be observed from the child.

Parental report is a necessary factor when completing any assessment of a young child, including one using the DC: 0-3R. The literature supports the notion that relying on parental or caregiver report is necessary when assessing infants and toddlers (Skovgaard, et al., 2007, Janssens, Uvin, Laroche, Reempts & Deboutte, 2009, Briggs-Gowan, et al., 2006). Since parents and caregivers spend more time with the child than anyone else, they have the benefit of observing more of the child's responses to various situations. There is also the risk that the parent's reports may not be sufficient or accurate. Clinicians using DC: 0-3R do rely on parental or caregiver report, but also make professional observations not only of the child but also of the parent-child interactions (Janssens, et al., 2009, Weston et al., 2003). The culmination of parental and caregiver reports not only provides information but also helps identify their representation of the relationship adds to the other methods of assessment being used. These varied assessment methods help the clinician evaluate any possible issues the child and the child's family system might be experiencing. This information informs the multi-axial diagnosis. This diagnosis, or lack thereof, will help determine how the clinician and family should proceed.

Diagnosing Infants and Toddlers

Many of the benefits and concerns of diagnosing an adult can be extended to diagnosing infants and toddlers. However, there are additional concerns raised when it

comes to children so young. The concerns range from the ability to be accurate, risks of labeling, insurance coverage, and a general lack of research available in this field of study. Although there have been some advances in these areas, it is still important to review these concerns and their possible implications.

One notable criticism of infant and toddler mental health is the question of whether or not professionals can accurately assess mental health in a child that young. Skovgaard et al (2008) found that neuro-development and parent-child relationship issues can be identified in children fewer than 10 months of age and that these appear linked to the development of mental health issues by 1 ½ years of age. This study further determined that sleeping and feeding issues can be identified, but that these issues do not appear to correlate with meeting the criteria for a mental health diagnosis by 1 ½ years of age (Skovgaard et al., 2008). These findings would indicate that issues can be identified and categorized in infants and toddlers, and there is a correlation between the type of problem and the development of a mental health diagnosis. Further studies have identified that there are differences in the tools used to diagnose, such as DC: 0-3R and DSM IV-TR.

Since the DSM IV TR is the most commonly accepted tool for diagnosing mental health disorders, comparing DC: 0-3R with it is one method of testing how it compares to current diagnosis methods. A study by Evangelista and McLellan (2004) reviewed several studies that analyzed differences in diagnoses between the DSM-IV and DC: 0-3 in children referred for regulatory and relationship problems. It should be noted that their data analysis utilized the non-revised texts for both DSM IV and DC: 0-3. Fewer children with presenting problems were diagnosed with a disorder when using the DSM

IV, while a significantly higher number of children evaluated with the DC: 0-3 met the criteria for diagnosis. This was true of both emotional and behavioral issues and indicates that DC: 0-3 seems to have higher sensitivity than the DSM IV in identifying these issues in young children (Evangelista & McLellan, 2004). With tools available that can identify symptoms in both infants and toddlers, there is also the question of whether or not those symptoms are merely something children will grow out of.

Although there are limited longitudinal studies, there has been some research to address whether or not symptoms in infants and toddlers persist into later years. Across a sample of children ranging from one year to four years old, it was determined from initial assessment to the final assessment one year later, that about half of the children with social-emotional and behavioral issues maintained those issues. In other words, atypical childhood behaviors often persist (Briggs-Gowan, Carter, Bosson-Heenan, & Guyer, 2006). Furthermore, there is general consensus that several persistent childhood diagnoses such as reactive attachment disorder, infantile autism, and ADHD are marked by presentation of symptoms by age three (Skovgaard, Houmann, et al., 2004). This would indicate that not only can symptoms be identified at early ages, but that many lifetime mental health issues can be identified in infants and toddlers. Since it is known that symptoms and disorders can be identified early in life, the next consideration is which method best identifies those symptoms and disorders in infants and toddlers.

Since DC: 0-3R is still relatively new professionals must consider the implications of using a relatively new tool. Preliminary studies indicate the tool has both validity and reliability and that this will be upheld if subsequent studies show similar results (Skovgaard, Houmann, Landorph, & Christiansen, 2004). Even with promising

results from early studies, these studies need to be replicated before professionals can rely on the tool being reliable and valid. One phenomenon that should be further studied is the differences among professionals and how their profession might influence how they view symptoms in young children.

The idea that personal experience and training can influence how a professional views the presentation of symptoms is one that must be evaluated when considering diagnosing young children. Ben-Sasson, Cermak, Orsmond, Carter and Fogg (2007) conducted a study using case examples that were based on the diagnostic criteria found in DC: 0-3R for anxiety and sensory disorders. When case scenarios were mailed in a small scale survey, psychologists were more likely to diagnose children as having generalized anxiety disorder while occupational therapists were more likely to diagnose children as sensory over-responsive (Ben-Sasson, Cermak, Orsmond, Carter & Fogg, 2007). These results indicate the diagnosis is not based solely on symptoms, but also on professional interpretation of those symptoms. Although only one study was found that addresses this phenomenon it does bring forth an issue of reliability if diagnosis is influenced by the profession of the clinician rather than solely on the presentation of symptoms. Since the professional's view appears to influence the outcome of the assessment, evaluating professional's views of and understanding of a diagnostic tool, such as DC: 0-3R, is useful.

There is often controversy over diagnosing young children and the concern has been raised that a mental health diagnosis of a child might be an economic tool. Stolzer (2009) raises the concern that public schools, which receive additional funding for children with mental health or behavioral diagnoses, encourage diagnosing children with

ADHD without taking gender, hormonal, and typical developmental behaviors into account. Another issue raised by Stolzer (2009) is that pharmaceutical companies profit from diagnoses such as ADHD while the medications can also have potentially harmful effects on a developing child. It is a serious concern if drug companies and schools are influencing decisions with regard to child mental health based on economic concerns. Stolzer (2009) focused on ADHD, but if it is true of one diagnosis it brings forth the potential that this issue could extend to other mental health diagnoses. Although further evaluation would be needed to determine the accuracy of the concerns, it is a potential ethical issue with regard to diagnosing young children. Although there are concerns diagnosing young children could be used due to economic incentive it is also important to consider the impact that having a diagnosis has on access to services.

Without a mental health diagnosis in the United States it is difficult to obtain necessary intervention services. Most insurance companies will not allow a clinician to bill without a diagnosis, and few clinicians will provide services without payment. Economically disadvantaged clients cannot afford to pay out of pocket and therefore have severely limited options (Treloar, 2010). Schools are required by law to accommodate education needs for children who have a diagnosis, but there are few, if any, special accommodations required for a child who has exhibited issues but is not diagnosed (Stolzer, 2009). The type of diagnosis might help inform the most appropriate treatment, and without a diagnosis there is increased risk of providing treatment that is not evidenced based for the presenting issue. Although there are pros and cons to giving an infant or toddler a diagnosis, it is important to have the ability to diagnose for accessibility to and consistency in treatment.

Early Intervention

The initial assessment and diagnosis of an infant or toddler helps to determine which, if any, mode of intervention is most appropriate. Although historically there has been little attention to the mental health needs of infants and toddlers, professionals are beginning to expand the knowledge base on infant and toddler mental health and subsequent interventions.

Early intervention proponents provide treatment based on the belief that the earlier an issue is identified and treated the better the long term outcome for the client. Skovgaard et al (2008) not only found that neuro-developmental and parent-child issues can be identified in children less than 10 months of age, but also that these indicators appear linked with mental health issues at 1 ½ years of age. Another study found that without intervention, one third of children with atypical developmental levels will meet the criteria for a mental health diagnosis within one year (Sterner, Albus, Thomas, & Howard, 2007). Lavigne, Rosenbaum, Binns, Christoffel & Gibbons (1998) had similar findings in a study spanning four years. Of the children, ages two to three, who initially had mental health issues, more than 50 per cent continued to exhibit symptoms four years later (Lavigne, Rosenbaum, Binns, Christoffel, & Gibbons, 1998). These studies consistently show that infants and toddlers determined to have early indicators of mental health symptoms have a higher likelihood of continuing to exhibit symptoms for up to several years later. This contradicts the belief that young children with behavioral and emotional problems will “grow out of it”, and it is important for professionals to be aware that young children have persevering issues (Briggs-Gowan, Carter, Bosson-Heenan, Guyer, & Horwitz, 2006). If these issues did dissipate over time intervention might not

be necessary, but data show the issues often persevere and therefore intervention would be warranted.

It is clear that intervention is worth pursuing, but how to intervene is less clear. Wallace and Rogers (2010) identify a significant issue in providing early intervention for early childhood diagnoses, such as autism, is that the availability of evidence based practices have not kept up with advances in diagnosing. Furthermore, different professions tend to view the same symptoms differently which would result different responses to intervention (Ben-Sasson, Cermak, Orsmond, Carter & Fogg, 2007). Since there are professional variations and there is limited information on evidenced based interventions for children this age, it is a topic that should be researched more thoroughly.

The literature does indicate that early symptoms often result in eventual mental health diagnosis in the absence of intervention. Subsequently, DC: 0-3R can help inform clinicians of potential and already present deviations in typical development that will help determine appropriate treatment. Although this literature review addresses early intervention, it does not review specific evidenced-based practices that are beginning to emerge. Although treatment methods are not thoroughly evaluated, the prevalence of non-transient mental health symptoms in infants and toddlers indicates the necessity of intervention. Since DC: 0-3R can help determine the assessment process and determining appropriate interventions, it is important to understand the frameworks instrumental in the creation of DC: 0-3R.

Conceptual Framework

Theories are based on observation and research and represent an attempt to construct a foundation for understanding and intervention. The DC: 0-3R was created to intentionally utilize knowledge from several different theories. These theories are developmental, psychodynamic, family systems, relationship, and attachment (Zero to Three, 2005). The goal of DC: 0-3R is to address mental health and developmental issues in infants and toddlers through a developmentally appropriate and systemic approach (Zero to Three). For these reasons this conceptual framework will focus on Attachment Theory and Systems Theory as the lenses for this study, with each representing core or foundational theoretical underpinnings to this diagnostic tool.

Attachment Theory

The conceptual framework of attachment theory was chosen not only because it is listed as a theory used in formulating DC: 0-3R, but also because it focuses on development within a relationships during childhood. John Bowlby is known for formalizing his insights from work with families into attachment theory, which has since been built upon (Bretherton, 1996). There are both criticisms and strengths to the theory that can be better understood after reviewing attachment theory.

Attachment theory focuses on early relationships as influential on how a young child develops. One key focus of attachment theory is that it reframed the notion of dependency, which was viewed as a negative consequence of a child's immaturity that inhibits self-sufficiency (Bretherton, 1996). This previous belief would pathologize attachment and aim to diminish any attachment in relationships. In contrast, attachment theory explores the "complementarity of attachment and exploration" (Bretherton, 1996,

p34). In other words, healthy attachment builds secure relationships resulting in a child feeling comfortable exploring his or her environment. In turn, this encourages the formation of autonomy. Both attachment and autonomy are viewed as normal and are formed in congruence with one another. Therefore, attachment is healthy and normal and has a functional purpose. Attachment can occur with more than one person and is viewed as a protective factor from potential harm, either physical or psychological (Bretherton, 1996). Just as healthy attachment can be helpful, issues in attachment can create problems. Understanding this basis for potential risk or protective factors can help evaluate how professionals are interpreting dynamics when completing an assessment and providing intervention. This phenomenon is further evaluated with regard to how issues with attachment in childhood influence the individual.

Bowlby's attachment theory discusses the role of what is referred to as internal working models. It proposes that there are two distinct internal working models: "one set that is accessible to conscious awareness and is compatible with what the child has been told and a second one, inaccessible to awareness, that represents the child's experience unaltered by parental interpretations" (Bretherton, 1996, p. 35). Basically, a child's conscious thought is formed around how the parent represents experiences and there is an unconscious that holds or interprets the events based in reality. When the internal working models have the same experience there are fewer issues with conflict. However, when the information is either misrepresented or is not presented appropriately for the child's developmental level the unconscious and conscious internal working models will conflict increasing risk factors for that child (Bretherton, 1996). Conflict between the child's internal working models "may in turn lead to unpredictable behavior patterns or

depression” (Slater, 2007, p. 212). This theory of internal working models can help explain how behavioral or mental health issues can arise in children.

The role of trauma in childhood experiences can significantly influence that child’s security based on attachment. For instance, a young child thought that creatures that looked like furniture would attack her could be interpreted to have pathological hallucinations. In this example, the child was reacting to the trauma of having a caregiver that abused her by abusing her and throwing furniture at her (Bretherton, 1996). This is an example shows how trauma can lead to unconscious thoughts not based in reality surfacing in response to a real event or series of events. Although it is important to identify and address the trauma of abuse, there are other traumas and influences that can affect children as well. The loss of a parent, accidents, witnessing traumatic events, significant stressors in the family, or having significant medical needs are all examples of traumas that can be experienced by young children. This information can be used to help understand how children might begin to develop issues within their environment and should be viewed as a way to help the child.

Attachment theory may help explain issues in early childhood development and this information can be used in helpful or harmful ways. Some have interpreted the theory to mean that children should be raised by stay at home mothers to ensure they develop secure attachments (Slater, 2007). It is important to remember that children can develop multiple attachments and there are other factors that can influence the development of a child (Slater). Professionals must be cautious to avoid blaming the parent when using attachment theory with children with attachment or behavioral issues (Slater). Children can be born with conditions influencing their ability to attach such as

autism or other developmental concerns and societal factors are important to consider as well. These concerns should be noted and kept in mind when using attachment theory to interpret information or interact with families.

Attachment theory contrasts with the many responses to mental health or behavioral issues that focus more on the individual and less on other factors. In fact, Bowlby recognized that “attachment issues do not exist in social isolation but develop within the broader context of group and family dynamics” (Slater, 2007). Furthermore, social support is not only important in childhood but as an adult as well (Bretherton, 1996). As a result, attachment issues can influence how interventions with children occur. Not only is the attachment between the child and their primary providers important, but also how the professional working with the family views their attachment. It is also important that attachment can occur between clients and professionals, which can also influence the assessment and intervention process (Slater). The literature shows that both attachment theory and DC: 0-3R focus on the impact of the social system in mental health. For this reason, the conceptual framework will also include systems theory.

Systems Theory

Although systems theory at its most basic form is quite broad it can be focused on the context of family and social constructs. The most general interpretation of systems theory outlines that there is a connection between all objects in a system resulting in any part of that system influencing all other parts of the system. Furthermore, when interacting or trying to understand any given system it must be viewed in its entirety or

information will be missing (von Sydow, 2002). Focusing systems theory helps create a basis for understanding individuals in the context of their environment.

Systems theory as it pertains to family or social interactions recognizes humans as the main object of the system. This means that in order to understand human interaction and behavior their relationship to other parts of the system must be analyzed. These parts of the system can include other people, economic status, and physical health among many others (von Sydow, 2002). Another important consideration is that individuals often view and react to similar situations differently (von Sydow). Therefore it is not only the interactions within the system itself that influences the individual, but also the way the individual interprets and reacts to those interactions. This creates a complex set of circumstances that influence every person involved in a child's life, including the practitioner.

According to systems theory every aspect of that system influences the individual. In the context of this study there are several "individuals" to take into account. Since the study focuses on the professional's view of the implications and understanding of DC: 0-3R it is important to consider what factors contribute to the professional's perspective as this could influence how they use the tool. For this reason the information collected will pertain to professional's experiences and beliefs. Although this is the main focus of many of the questions, there are several other factors to consider. The view of the child and the child's relationship to the family system must also be considered. Since infants and toddlers have little control over their environment or adult responses it is also important to consider that the family system of the child influences the process as well. For these reasons the professional's interviewed were asked to explain how they feel

different factors in the child's environment influence the assessment process. The information collected was be interpreted through the frameworks of both systems and attachment theory.

Method

The literature review revealed that the ability to accurately diagnose infants and toddlers, although new, is becoming more accurate. However, this process relies heavily on the professional being able to use their expertise to assess the child based on observations and interactions with the caregivers. Ben-Sasson, Cermak, Orsmond, Carter and Fogg (2007) also determined that diagnosis could be influenced by the perceptions of the clinician. The literature review revealed no sources that have evaluated the professional perspective in the use of DC: 0-3R. For this reason, the study was based on a pilot study conducted by this researcher. The pilot study consisted of an interview with one professional currently using DC: 0-3R. The interview contained ten questions pertaining to DC: 0-3R and the professional's views and use of the tool. The completed study sought to build on the pilot study to increase understanding of professionals' views and use of DC: 0-3R. In order to address this question a multi-participant qualitative study was be used. Since the goal of the study was to determine a sample of professionals' views and uses of the DC: 0-3R, the research design sought to obtain a sample that had the ability to provide insight into the research goal. This study evaluated the views of a group of practicing mental health clinicians regarding potential implications of using DC: 0-3R.

Sample

The study question focuses on the views of professionals using DC: 0-3R. To be trained in and use DC: 0-3R a professional must be a master's level practitioner. The sample selection was taken from a narrow population of master's level practitioners who are trained in and using DC: 0-3R. The ideal and obtained sample size for this project

was ten participants, and included the information collected in the pilot study. The selection process utilized convenience sampling through the use of a list of professionals trained in and using DC: 0-3R in the state of Minnesota. Professionals were contacted individually through email based on the fact that they specialize in DC: 0-3R. This process began in February of 2012 and continued until March of 2012. How the participants were selected and approached was intentional to protect the participants.

Protection of Human Participants

Several steps were taken during this process to ensure that participation is voluntary and that the participants were not put at risk in this process. The interviewees were all professionals who are working in master's level positions, which indicate they are at minimal risk for being vulnerable since they are professionals being interviewed about their positions. As the content of the interview focused on their professional knowledge and experiences, it minimized potential risk. There was no financial incentive. Furthermore, all potential participants reviewed and signed a consent form (see Appendix A) outlining the purpose of the study and informing them their participation was voluntary and outlining how they could withdraw. They were informed they can withdraw at any point during the interview and up to one week after the interview by notifying the principle investigator in writing or by phone. The consent form included information such as that the interview will be taped, transcribed and presented in the form of a paper and presentation. Transcription was completed by this writer. All tapes, notes, and identifying information will be stored in a locked safe at the researcher's house until after the final presentation in May 2011, after which the taped interview and transcripts

with identifiable information will be destroyed. De-identified transcripts and consent forms will be kept.

Data Collection

To learn about each participant's view of the implications of using DC: 0-3R, a series of interviews were conducted. Each participant was asked to choose a time and place to complete the interview. This selection was based on convenience for the participant. However, participants were asked to choose a location and time where there would be minimal interruptions or background noise that could interfere with the interview or audio-recording. The participants were also given the option to receive a copy of the consent form and interview questions in advance, which were sent out by email.

A questionnaire consisting of twenty questions was used to guide the interview (see Appendix B). The majority of the questions were open-ended. Clarifying questions and prompts pertaining to the responses were asked as needed. The initial questions asked about the participants' professional training and experience. Several of the questions were specific to child development. Another focus of the questions pertained to caregiver involvement in the process. The remainder of the questions pertained specifically to the DC: 0-3R assessment and how the assessment information is used. Each interview was audio-recorded and subsequently transcribed to aid in data analysis.

Data Analysis

The data analysis occurred after the transcriptions of the interviews were complete. The transcript of the interviews was reviewed by the researcher and a peer was consulted to increase validity of the findings and minimize potential bias of the

researcher. Based on the qualitative nature of the study and the specific questions asked, the data were analyzed by theme with emphasis on manifest content. Manifest content refers to content that is “physically present and countable” (Berg, 2009, p. 343). Since the emphasis was on manifest content there was an initial start list to help code the data. The initial start list included the themes of child development, family dynamics, and diagnostic process. The final list focused on the themes of attachment, systems theory, training tools and assessment, child’s expression of symptoms, completing a DC: 0-3R assessment, and the purpose of completing an assessment. Data analysis strategy is one of the several things to consider when looking at strengths and limitations of this study.

Strengths and Limitations

As with any study, this qualitative study reviewing professional views and understanding of DC: 0-3R has strengths and limitations. Some of the largest limitations of this study are a result of the qualitative nature of this study. The study only had ten participants which is a small sample. Such a small sample size reduces generalizability of the data. Furthermore, the participants were purposefully selected on convenience and experience and the majority of the participants were from a limited geographical area. This further limits the generalizability and reliability of the data collected. Another limitation is that this is an original study using a questionnaire created specifically for this study. Although this helps focus the information collected on the topic, there is no research to support whether this is a valid or reliable tool. Although there are several limitations to the study, there are also several strengths.

Several strengths exist with regard to this study. To begin with, this is a qualitative study which will result in in-depth information being collected. Another

strength is that the selection of participants will ensure that only professionals with experience and training relevant to the topic are interviewed. This means the information collected is more likely to pertain to the study question of the professional view and understanding of DC: 0-3R. The strengths and limitations of any study can never be fully identified, but the mentioned strengths and limitations are an attempt to identify the most significant factors in this particular study.

Results

In order to gain understanding of professional views and implications of DC: 0-3R a qualitative study was completed. The themes found in the research were collected through individual interviews. Significant themes focused on the information needed to complete a diagnostic assessment, the child's expression of symptoms, the purpose of completing a diagnostic assessment with young children, systemic intervention, strengths and limitations of the tool, as well as several other smaller sub-themes.

Sample

Participants in this study were selected on the basis of their training in and use of DC: 0-3. A total of ten respondents were used to collect the data. One of the interviews was completed as a pilot study. Six of the interviews were conducted in person while an additional two were conducted over the phone. The remaining respondent provided written answers in response to the request for an interview. The majority of respondents were master level professionals while two of the respondents had post masters education. Professions included marriage and family therapy, counseling, psychology, and social work, and most reported at least some experience with infants and toddlers before attending the DC: 0-3R training. All of the respondents work with children and families. Although contacts were made to both male and female professionals, only females were interviewed due to there being no male respondents who agreed to be interviewed. Every participant reported receiving formal training for using DC: 0-3 and there were a variety of other resources and tools mentioned as well.

Training and Assessment Tools

Every professional interviewed reported consistencies in types of training they received and there were several additional types of educational and assessment tools mentioned by the professionals. All participants reported attending the initial DC: 0-3 or the subsequent DC: 0-3R training held by the state. Approximately half of the participants reported attending one additional training specifically on the DC: 0-3 or DC: 0-3R. Six of the professionals also mentioned attending the EC SII (Early Childhood Service Intensity Instrument) training, while three reported attending the Strong Foundations training. Approximately half reported attending at least a few Great Start meetings where they received consultation on using DC: 0-3R. Additional training mentioned that were pertinent to DC: 0-3R included early childhood mental health, trauma, development, attachment and several intervention trainings. Most of the participants mentioned at least one of the following names of figures in Minnesota in the early child mental health movement; Teri Rose, Catherine Wright, Carol Siegler, and Anne Gearity. Continued education in the field through trainings and consultation were mentioned at least once by every participant but one. Not only was the theme of continued education prevalent, but there were several other themes with regard to completing a diagnostic assessment.

Completing a DC: 0-3R Diagnostic Assessment

Throughout the interviews it was clear that there were numerous considerations involved in completing a thorough diagnostic assessment for the child. One of the most common responses to questions about the diagnostic assessment was *it depends*. It was

evident that each professional interviewed took into consideration unique attributes of each child and that child's family dynamics. When elaborating on what the assessment depended upon, variations in age and developmental level, family dynamics, number of meetings with to complete the assessment and other systems involved emerged as responses.

When discussing age ranges that the professionals have used the tool with there were some variations. Although all of the professionals acknowledged that DC: 0-3R can be used with infants very few reported using it with children younger than two or three years of age. Several professionals reported never receiving referrals for infants and others reported *I think the youngest I ever got was 14 months and I've only ever done a few infants*. One respondent speculated that she believes she receives so few referrals for that age because the community is not well enough informed to know that infants can have mental health issues and it can be assessed. Although all of the professionals reported knowing the tool could be used for children beginning at birth, there were inconsistencies in how old a child could be to still use the tool. The majority of the professionals reported using the tool up to age five, and two reported they were confused on what the state expectations were. The confusion for both was whether or not the state was requiring the use of the tool through age four or through age five. With regard to children older than five most reported that they would rarely use it for children older than five but it was reported it has been used for children up to age seven. Circumstances in which professionals reported using the tool for older children included; *if there are developmental delays, when the DSM does not seem to fit the situation, when there has been a lot of trauma or neglect, when the child was younger when I began working with*

them I will keep using it with them and if the issues appear to be more attachment based.

The oldest age reported for using DC: 0-3R for the diagnostic assessment was seven years old. Although there were variations in the oldest age that the professionals reported using the diagnostic assessment with almost all of the professionals reported relying on DC: 0-3R concepts when doing a DSM diagnostic assessment with older children.

Reasons for this included; *because it is more parent friendly, it explains what is going on for them much better than the DSM, because the DSM is more diagnostic about the person rather than the situation, and it is developmental and attachment based.*

Considering the age of the child is only one of the aspects considered by the professionals when doing a DC: 0-3 assessment.

The number of sessions, who is present, and location of the sessions varied between the professionals. In most situations the assessment process begins with one parent, with most professionals stating that although they attempt to meet with both parents that most often only one parent is present. The initial meeting and screening tools were reported to dictate further meetings. For instance, *you have a mother who says her child is unmanageable...I can't discipline because grandma lives there and he runs to grandma. So I say, well we need to bring grandma in.* Most of the professionals interviewed reported that after an initial meeting or screening they would use that information to determine who else needed to be involved such as, daycare providers, siblings, schools, grandparents, or other caregivers. Although most interviewees reported similar responses to who should be involved, there was greater variation in how many meetings the assessment should take.

Responses regarding the number of sessions to complete an assessment and where those meetings would occur varied greatly. One provider shared she would complete her assessment in one to two meetings with the child and family. Several of the professionals reported it required two to four meetings depending on how many settings were involved. Only two professionals reported more than four sessions to complete an assessment, one of whom stated she does four to five and the other shared she does four to six sessions. Most of the professionals reported doing assessments in school or daycare settings and approximately half of them reported they do not do assessments in the home. Only two providers reported the office as the primary location for meetings during the assessment period. The rationale for why professionals do office based or fewer meetings included; agency practices as well as the time and cost restraints of driving distances or having additional sessions that the insurance will not reimburse for. Reasoning for why providers completed sessions outside of the office and a larger number of sessions included; it is a more natural environment where you will see more typical behaviors, it helps assess the type of relationship the child has with different people, and that it helps connect systems. One interviewee shared that if there are not more sessions, *it is not enough time and you end up diagnosing wrong...I can put a label on in 50 minutes but it doesn't tell me what's going on or how to fix it.* There were variations found in the degrees of the professionals, how many sessions they use, where they do the assessments, and who is included but there were many similarities in what information should be gathered during an assessment.

The most consistent information collected during the interviews pertained to what information was being assessed during the diagnostic assessment. Every

practitioner interviewed emphasized the role of relationships in the overall well-being of the child and family unit. Themes focused around what the child expected from different adults in their lives as well as what reactions the adults had to the child. Comments such as *development takes place within our relationships so I'm always assessing the quality of attachment as well* were common throughout the interviews. Table A shows the responses from the professionals interviewed with regard to both child and adult actions within a relationship.

Table A Caregiver and Child Responses

Responses from the child	Responses from the adult/caregiver
<ul style="list-style-type: none"> • <i>Connection with the adult</i> • <i>Representative play</i> • <i>Emotional responses</i> • <i>Sensitivity or insensitivity</i> • <i>What they expect from adults</i> • <i>Does the child use mom as a secure base to explore the world</i> • <i>I look for cues of signs of distress in children, so even if they can't talk, if an infant is touched and arches its back that really is telling us something.</i> • <i>If an infant is rigid and pulls away from mom that tells me the baby is telling me I don't feel safe in mom's arms or I can't predict that mom is going to respond to what I give her.</i> 	<ul style="list-style-type: none"> • <i>If the caregiver endeavors to understand the child</i> • <i>The caregiver's ability to provide age appropriate limits and options</i> • <i>Stress level of the caregiver</i> • <i>Does the parent respond to interactions initiated by the child</i> • <i>Is the parent reaching down and interacting with the child, are the sitting on the floor with the child...how much interaction do they have</i> • <i>Does the parent attempt to comfort the child</i> • <i>Does the parent internalize the child's behavior</i>

Although the interactions in the child caregiver relationship were consistent themes of what was considered during an assessment, there were several developmental markers that were mentioned as well. This includes both physical and social skills. Some of the developmental markers mentioned included; *crawling, walking, first words spoken, learning to read, fine motor development, use of language, how unexpressive or over-*

expressive they are, and eye contact. When discussing developmental markers most of the professionals reported that it is important to keep in mind what is typical for that age and that there are variations. Only one of the participants discussed the role of culture in development, such as if a child is raised in a culture where they are always carried they might not walk as early as developmental standards state that child should. If the variation is cultural then it should not be considered a delay. Six of the professionals also emphasized that life stressors also influence development that need to be considered when assessing a child. *If there is some sort of trauma that occurred or stressor that occurred at the time development decreased it would be more of an environmental concern versus say a referral to a special education situation.* Since stressors and life situations do influence the child's development it is not only the development but any traumas or stressors that need to be assessed. Every professional stated it is important to have a parent inventory screening to help identify potential concerns, but the way the child communicates is also a focus.

Child's Expression of Symptoms

Being able to understand a child's expression of symptoms is essential to accurately assessing what is going on for that child. *Younger kids have different ways of portraying symptoms. They also have less verbal capacity to tell us what hurts.* In every interview and the written response it was evident that whether or not the child has the ability to communicate through language that every child can and does communicate through a variety of ways. *Toddlers communicate through their behaviors and feelings. Us not being adequately trained as either professionals or caregivers in understanding their language does not mean that they are not communicating.* Part of identifying

symptoms begins in a young child is understanding how children typically develop.

Table A emphasized the relational aspect of child development showing several ways the professionals identified children's expression of relational issues, and there are many other identified communications skills of young children identified. *When a child demonstrates negative behaviors it is them saying I don't feel good, something's wrong. Whether that something is wrong with me, something is wrong with my family system, something is wrong with my mom...a child is letting us know something is up.* One theme in how the professionals identify areas the child is working on is through observing their play and identifying any representational play. *Cues of distress*, symptoms of anxiety and depression, aggressive behaviors, reaching, eye contact, crying or tantrums, and other body language were all mentioned as means of communication that can be assessed. One provider gave an example that infants might throw up or hiccup in response to feeling overstimulated. Another explained *if they are not taking a really good trauma history it is easy to think a kid has autism because kids will shut down from trauma.* She explained that symptoms of trauma can be misdiagnosed as autism and this must be evaluated during the diagnostic assessment. Identifying symptoms and causes in symptoms in young children is a step toward responding to it.

Purpose of Completing a DC: 0-3 Assessment

Throughout the interviews it was repeatedly mentioned that DC: 0-3R is not a treatment method, but a *framework to inform treatment*. Almost all of the participants commented on the purpose of getting a DC: 0-3R assessment is to help inform treatment; *diagnosis determines intervention*. Over half of the respondents mentioned they emphasize to the family that a DC: 0-3R diagnosis is a *snapshot of what is going on right*

now and that the diagnosis helps determine not only what intervention to use but the ability to access funding for services. Three participants gave specific examples of when there are wrong diagnoses which would change the type of intervention. Doing a thorough assessment helps identify whether a child diagnosed with ADHD, oppositional defiant disorder, or autism might actually be working through the results of trauma. The framework focuses not only on weaknesses in the family unit, but also on strengths. *You're not coming at a parent with, um, you are really lousy with x, y, z, let's make you not so lousy anymore. There's a framework that allows it to be gentle in pulling the family back together.* This utilization of strengths and areas for improvement are helpful in working with various family dynamics and systems the child is involved in. Family members and service providers are included not only during the assessment to help identify potential issues and strengths, but are ideally also included in the intervention. The theme of how DC: 0-3R is a framework to inform treatment continually emerged during the interviews.

The importance of prevention and early intervention was another predominant theme. One subject stated *I'm a huge proponent for early intervention, I think the earlier we get these kids in the more quickly the healing can begin and it lessens the likelihood of them being much sicker when they get older.* Two additional participants discussed how many children have to wait several months to get an assessment and talked about how *for an eight month old a lot changes in two months.* Overall, the theme of early intervention and prevention being important was evident in responses from every participant.

To elaborate on early intervention one participant told a story to be used as an analogy for early intervention in which a village notices children floating down the river

and creates a comprehensive community approach to get the children out of the middle of the river. Eventually one community member abandons the rescue mission to walk upstream to try and figure out how these children are ending up in the river in the first place. The participant referred to the current mental health and educational response to children's mental health issues as *we're doing what we can to save them, but they're already floating down the middle of the river*. When referring to DC: 0-3R the subject stated, *the idea is to go up the bank and find out why in the heck these kids are being tossed in the river...so that we're rescuing kids closer and closer to the shore*. The theme of early intervention repeated throughout the interviews, as did systemic intervention.

Systemic Intervention

Systemic intervention refers to interventions that include relevant systems in the plan, which is a focus the participants referred to often when discussing DC: 0-3R. *One of the largest benefits is that it is very systemic...it looks systemically at the family and the primary caregivers and relationships within those dynamics and how that is affecting behavior and symptoms for the child*. Six of the participants reported that they actively attempt to involve all caregivers from the family, schools, and daycares. One participant further elaborated, *so it's about, um, the system coming together, being on the same page to address this particular child's needs*. Systemic intervention was clearly emphasized as important as were several limitations and strengths of using DC: 0-3R.

Strengths and Limitations

Every professional that participated in this research provided a variety of examples of strengths and limitations they have seen while using DC: 0-3R. Some of the

strengths and limitations have to do with beliefs about theoretical frameworks while others address more practical matters. One such practical matter is billing.

As with many other mental health services, billing is a consideration when providing a DC: 0-3R assessment. All but two of the professionals addressed the issue that a complete DC: 0-3R assessment is time consuming. Over half of the respondents addressed reimbursement through insurance as an issue. *Insurance companies aren't on board yet so we have a way of cross-walking to the DSM IV diagnoses for billing purposes.* In other words, once a DC: 0-3R assessment has been completed the professional must use a “crosswalk” to change the diagnosis to a DSM IV diagnosis. One improvement in this process that was noted by three professionals is that the state has authorized reimbursement for three sessions rather than the typical two sessions allowed for a DSM IV diagnosis. Although billing was a theme in the findings, there were a variety of other strengths and limitations discussed as shown in Table B.

Table B Strengths and Limitations of DC: 0-3R

Strengths	Limitations
<ul style="list-style-type: none"> • <i>The more active involvement of caregivers and relevant relational influences</i> • <i>It is a team process</i> • <i>The 2nd axis</i> • <i>The sensory diagnoses</i> • <i>It's comprehensive and it looks at the relationship, causes, and has a developmental focus</i> • <i>The criteria are based on young children</i> • <i>The crosswalk</i> • <i>There was a lot of caution many years ago about working with this population...this diagnostic manual opens the door for kids to receive services much much earlier</i> • <i>It is systemic</i> • <i>The developmental lens is very accurate</i> • <i>Enables early intervention</i> • <i>It has put early intervention and prevention for infant/toddler mental health on the map</i> • <i>It is not culturally bound</i> • <i>It is a roadmap to treatment</i> • <i>There is access to the consultation group Great Start to get feedback</i> • <i>It gives you a better idea of what is really going on for the child</i> 	<ul style="list-style-type: none"> • <i>It is cumbersome and not perhaps realistic to use consistently</i> • <i>I wish they would have adult attachment styles</i> • <i>It can only be used up to age 4</i> • <i>I wish it had a developmental trauma disorder</i> • <i>Insurance issues</i> • <i>The crosswalk</i> • <i>They eliminated behavior disorders and I understand....but you get a diagnosis to get services....I wish they would have included behavioral disorders simply for the fact that some kids aren't going to get services now.</i> • <i>The criteria for the anxiety disorders is poor</i> • <i>There is some stigma in treating infants and toddlers....that's a limitation because we don't service as many kids and families as we could</i> • <i>It does not assess the quality of parenting the parent had</i> • <i>It is not recognized in the medical community</i> • <i>The terminology can sound negative</i>

Table B refers to a compiled list of all of the strengths and limitations mentioned by the participants. It should be noted that the majority of every strength listed was mentioned by at least half of the practitioners while most of the limitations were only mentioned by one or two practitioners. The overall impression given by the participants is that DC: 0-3R has many more strengths than limitations.

Although there were several variations in perspectives on DC: 0-3R, the assessment process, purpose of the assessment, and strengths and limitations it was evident that most of the practitioners found the tool to be helpful. In fact, most of the practitioners reported that they have expanded their use of DC: 0-3R concepts to gain a better understanding of what needs and issues their older clients face. So even when the DSM IV is the tool being used for the diagnostic assessment DC: 0-3R concepts are still considered. With so much information gathered from those practicing with the DC: 0-3R it is helpful to consider how the information collected in these interviews compares to the information found in the literature.

Discussion

Several considerations should be taken into account when evaluating the information gathered from interviews with the professionals using DC: 0-3R. There were several main themes including systemic intervention, attachment, child's expression of symptoms, DC: 0-3R as a framework to guide treatment, and billing. Overall, the participants portrayed DC: 0-3R as a tool to enhance their ability to intervene earlier by being able to diagnose children younger than previously possible. With the ability to diagnose comes the ability to inform treatment, which is another aspect the subject viewed as strength of using the tool. Part of the focus of the diagnosis and subsequently the treatment is systemic intervention which is best to be done as early as possible. Every participant was able to identify that a child can express their symptoms, thoughts and feelings without relying on verbal skills that might not yet be developed. Participants identified that the age appropriate classification of symptoms in DC: 0-3R and the comprehensive assessment were all benefits of the tool. Of all of the themes revealed in the data analysis, the theme of billing appeared to be presented as an essential consideration but only to the extent of which it allows for treatment and assessments to be funded. Many of these themes found in the data were also revealed in the literature review.

DC: 0-3R Structure and Billing

Although the structure of DC: 0-3 has several implications, one surprising one is the use of the multi-axial format to enhance billing opportunities. As noted by Evangelista & McLellan (2004) DC: 0-3 and subsequently DC: 0-3R follow diagnostic criteria along 5 axes, which correspond to the 5 axes of the DSM IV (Evangelista &

McLellan, 2004). The data analysis revealed that state funding and insurance companies do not currently recognize DC: 0-3R for billing purposes and therefore there has to be a *cross-walk* between DC: 0-3R and the DSM IV in order to procure funding. Despite the crosswalk being necessary for insurance and billing purposes most of the participants reported that the crosswalk does not adequately explain the comprehensiveness of the DC: 0-3R diagnosis. Concerns regarding this included other professionals' lack of knowledge about DC: 0-3R assessments, having essential relational and attachment information de-emphasized, and the billable diagnosis being less accurate than the DC: 0-3R diagnosis. Even with the concerns the need to bill for services requires professionals to utilize the crosswalk. The corresponding axes between the two diagnostic classifications help professional who use DC: 0-3R bill for services, which was indicated as essential in the data analysis. Although billing is necessary, the other findings relate to the interactional process between the clinician, child, and the child's system.

Factors in Assessment Process and Child's Expression of Symptoms

Both the literature and the qualitative data collected agree that although understanding a child's presentation of symptoms has its challenges, that those symptoms can be accurately assessed. Understanding typical development is the first step in being able to identify atypical development (Sturner, et al., 2007) and since young children have limited verbal abilities developmentally appropriate assessments must be completed (Evangalista & McLellan, 2004). These ideas were supported by the data *the DSM is set up for kids who are 5 and older and younger kids have different ways of portraying symptoms. They also have less verbal capacity to tell us what hurts.* The concept of verbal capacity is often focused on, but other means of communication exist. Vallotton

(2008) determined that infants and toddlers are able to intentionally use gestures and object representation to communicate. The data collected support the idea that infants and toddlers can communicate without verbal capacities through the use of representative play, behaviors, feelings, body language, and several other means of communicating. Despite speculation about the ability for infants and toddlers to communicate both the literature review and the data analysis show that there are numerous means of communication for young children. It was even indicated in the data analysis that infants and toddlers communicate immensely, but that professionals and caregivers might not be adequately trained to understand what is being communicated. Even though there are limitations in understanding infants and toddlers, there are developmentally appropriate ways to assess the functioning of young children. The correlations in assessments lead into correlations in intervention strategies as well.

Theoretical Frameworks and the Data

The theoretical frameworks of attachment theory and systemic intervention were found throughout the interviews. The significance of attachment in DC: 0-3R is most notably found on Axis II which assesses the relationship between the caregiver and the child. Both the Parent-Infant Relationship Global Assessment Scale (PIR-GAS) and the Relationship Problems Checklist (RPCL) are integral parts of determining the level of attachment and overall quality of the child and caregiver relationship (Zero to Three, 2005). The comprehensiveness and importance of evaluating Axis II relational issues was predominant in the data analysis. Furthermore, attachment theory discusses that issues arise when there is conflict between the internal working models (Bretherton, 1996). Although this was addressed multiple times by the interviewees, there is one

exemplary example of conflicts that can arise when the internal working models conflict. One of the participants shared that she worked with a child who had witnessed an extremely violent act at a very young age. The caregivers had not addressed this with the child and the child's representational play indicated that the child was reliving the trauma. She specifically addressed that this child had this memory but did not understand where it was coming from and she stated *I don't have a lot of hope that it is going to get resolved until he can put the pieces together*. Although the participant did not use the terminology of attachment theory and internal working models it is a clear example of this concept being addressed by a professional using DC: 0-3R. There were also a plethora of examples of both child and adult reactions assessed in DC: 0-3R diagnostic assessments that were relationship based most of which focused on how either the child reacted to the adult or vice versa. The theoretical framework of attachment theory was evident in the data analysis, as was information about intervention.

Systemic intervention was a strong theme in both the literature review and the interviews. More generally, the data also emphasized early intervention, which in the context of the information collected includes systemic intervention. Sterner, Albus, Thomas & Howard (2007) found that one third of children with atypical developmental levels met the criteria for mental health diagnosis within one year if they did not receive intervention. This matches the idea from the data that *the earlier we get these kids in the more quickly the healing can begin and it lessens the likelihood of them being much sicker when they get older*. The data and the literature both emphasize the impact that early intervention can have, and systemic intervention is also addressed. Skovgaard et al., (2008) determined that parent-child relationship issues can be identified less than 10

months of age and are linked to mental health issues when older. DC: 0-3R aims at involving the caregivers in the intervention address such issues. *You're not coming at a parent with, um, you are really lousy with x, y, z...there's a framework that allows it to be gentle in pulling the family back together.* The data also elaborated that caregiver is anyone that child spends time with so although it is usually a parent this approach includes other caregivers such as grandparents, daycare providers, schools, or other people involved in the child's life. These are clear examples of different systems that are essential in not only completing a DC: 0-3R diagnostic assessment, but also in the intervention phase. Interventions formed out of this framework are more systemic which is important to consider in implications of the findings.

Implications

In attempting to determine how professionals view the implications of using DC: 0-3R, several different themes and limitations arose. The consensus among the literature and the data analysis show high regard for systemic and early intervention when considering infant and toddler mental health. Although it is agreed that systemic and early intervention is preferable, the specifics of effective interventions are not included in the DC: 0-3R or in this study. Other issues of contention focus on the ability to accurately assess a child's expression of symptoms and the interpretation of those symptoms through a developmentally appropriate lens. It appears that if a person is not well educated in early childhood development or in-tune to non-verbal and behavioral communication, that using the DC: 0-3R would render inaccurate results. Although the data collected indicates knowledge in early childhood development is presumed when getting trained in DC: 0-3R, the scope of this study cannot adequately address whether or not practitioners commonly have this background. It was evident that most of the professionals interviewed did have experience with child development, but due to the small scale of this study it cannot be generalized to represent a greater population. Despite these limitations, the data analysis revealed the practitioners to have a positive view of the tool as well as implications of using the tool.

Even with such positive beliefs about DC: 0-3R and the ability to provide preventative and early intervention services, there are several potential areas for further study. One of the largest limitations is that DC: 0-3R is a relatively new tool and there is no longitudinal data on the effectiveness of using the tool to address early mental health issues and potentially limit the likelihood or severity of issues in adulthood. Other areas

for further study that should be noted include provider knowledge of child development, beliefs and uses of different diagnoses, and effective intervention strategies based on diagnosis. Although there are several areas for future study of DC: 0-3R, there are also several benefits that are currently utilized.

Despite being a relatively new tool, DC: 0-3R has helped professionals in their work with young children. It has provided the first comprehensive and developmentally based diagnostic criteria for infants and toddlers. Being able to diagnose infants and toddlers has resulted in new services and earlier intervention which might not have been possible without DC: 0-3R. It has also created new opportunities for professionals to have a common tool to view mental health issues of infants and toddlers. Utilizing DC:0-3R can assist clinicians in intervening with infants and toddlers and the entire family unit to address mental health and relational issues early on to increase the chance of the child developing more typically and having fewer issues. One potential issue is that the tool does not appear to be widely recognized by pediatricians, schools, and even other clinicians. The use of consultation groups provides a format for addressing limits of the tool and an avenue to gain insight. These potential benefits in the field focus more on DC: 0-3R itself, but there are also several strengths and limits of this specific study.

Strengths/Limitations of the Study

As with any study, there were both strengths and limitations of this study. The strengths included that the information collected was qualitative, providing the participants the opportunity to elaborate on issues or benefits that they find most pertinent to their work with DC: 0-3R. Another strength is that DC: 0-3R is a tool that was not

well known to the researcher at the beginning of this project, which helped limit any potential bias from previous experience. Other strengths included that the method of recruitment ensured voluntary participation with no coercion. The recruitment method also focused on potential participants who had been trained in the tool so their experience was relevant to the study. Although there were many strengths, there were also limitations. The study itself was small scale making it unrealistic to generalize any results. Furthermore, there is potential for participant bias because it is unlikely that a professional would focus their practice with the use of a tool that they did not believe had merit. Although it is a strength that they use the tool, it could potentially be a limitation due to potential bias in responses. Another limitation is that due to the demographics of people who responded the information was collected from females who were predominantly Caucasian. Due to these demographics there is no information from male respondents and little information gathered from minority respondents. Despite any limitations, the information collected had some strengths and provided good insight into the views of DC: 0-3R by professionals using the tool.

Conclusion

The data and the literature show that although there are several strengths of DC: 0-3R, there are some limitations that have not been sufficiently addressed. The largest strength of DC: 0-3R is that it allows professionals to assess infants and toddlers using a developmentally appropriate and systemically focused tool. The framework also includes emphasis on early intervention. Since there are several limitations, including reliance on prior knowledge and lack of evidenced-based interventions further development of the tool is recommended. By focusing further studies on professionals' knowledge of development, evaluation of intervention effectiveness, and a longitudinal study to determine accuracy of a DC: 0-3R diagnosis, the tool can be improved. Despite the limitations in both the tool and the research surrounding the tool, the strengths of DC: 0-3R seem to help influence the professionals' view of the implications of DC: 0-3R as a positive tool that when used properly will improve the lives of infants and toddlers with mental health issues.

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Appendix A Consent Form

CONSENT FORM

Please read this form and ask any questions you may have before agreeing to participate in the study.

Please keep a copy of this form for your records.

Project Name	Professional Views and Understandings of DC 0-3R	IRB Tracking Number	287935-1
General Information Statement about the study:			
<p>The purpose of this study is to gain information about the understanding and use of DC 0-3R by professional clinicians. This qualitative study will consist of a series of questions that focus on the assessment and diagnostic process as well as interactions with the child and family during that process. Each interview is projected to last approximately one hour and will be audio-recorded, transcribed, and the data will be analyzed.</p>			
<p>You are invited to participate in this research. You were selected as a possible participant for this study because:</p>			
<p>You have been contacted as a potential participant for this study because you were identified as a professional that is trained in and using DC 0-3R.</p>			
Study is being conducted by:		Jennifer Chasco	
Research Advisor (if applicable):		David Roseborough	
Department Affiliation:		Graduate School of Social Work	
Background Information			
The purpose of the study is:			
To evaluate the professional views and understanding of DC 0-3R.			
Procedures			
<p>If you agree to be in the study, you will be asked to do the following: <i>State specifically what the subjects will be doing, including if they will be performing any tasks. Include any information about assignment to study groups, length of time for participation, frequency of procedures, audio taping, etc.</i></p>			
<p>If you agree to participate you will be asked to complete an interview with the principle investigator, Jennifer Chasco. The interview consists of twenty questions about your training and experience with DC 0-3R as well as your use and understanding of the DC 0-3R tool in your assessment, diagnostic, and interview process.</p>			

Risks and Benefits of being in the study
The risks involved for participating in the study are:
There are no known risks.
The direct benefits you will receive from participating in the study are:
There are no known direct benefits.
Compensation
Details of compensation (if and when disbursement will occur and conditions of compensation) include:
<i>Note:</i> In the event that this research activity results in an injury, treatment will be available, including first aid, emergency treatment and follow-up care as needed. Payment for any such treatment must be provided by you or your third party payer if any (such as health insurance, Medicare, etc.).
There will be no compensation for completing this study. There are no expected physical or mental health risk anticipated as a result of participation.
Confidentiality
The records of this study will be kept confidential. In any sort of report published, information will not be provided that will make it possible to identify you in any way. The types of records, who will have access to records and when they will be destroyed as a result of this study include:
The principle investigator will be the only person with access to your name. If a transcriber is used they will receive only the audio-recording of the interview and will be expected to maintain confidentiality as outlined in the Transcriber Agreement form. Another graduate student will review the de-identified transcript of the interview to limit potential researcher bias in the data analysis. Once the other graduate student has finished reviewing the data all copies of the transcripts will be returned to the principle investigator. All audio recordings, consent forms, and transcripts of the interview will be kept locked in a safe at the primary investigator's house until the completion of this project May 30, 2012. All audio recordings, notes, consent forms, and transcripts with identifying information will be destroyed at the completion of this project. Paper and electronic de-identified copies of the transcripts will be kept indefinitely.
Voluntary Nature of the Study
Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relations with any cooperating agencies or institutions or the University of St. Thomas. If you decide to participate, you are free to withdraw at any time up to and until the date\time specified in the study.
You are also free to skip any questions that may be asked unless there is an exception(s) to this rule listed below with its rationale for the exception(s).
You can voluntarily withdraw from participation at any point before or during the interview. You will have one week after completion of the interview to withdraw the information from your interview, after one week you can no longer withdraw the information from your interview.

Should you decide to withdraw, data collected about you	will NOT be used in the study		
Contacts and Questions			
You may contact any of the resources listed below with questions or concerns about the study.			
Researcher name	Jennifer Chasco		
Researcher email	chas5771@stthomas.edu		
Researcher phone			
Research Advisor name	David Roseborough		
Research Advisor email	djroseboroug@stthomas.edu		
Research Advisor phone	651-962-5804		
UST IRB Office	651.962.5341		
Statement of Consent			
I have read the above information. My questions have been answered to my satisfaction and I am at least 18 years old. I consent to participate in the study. By checking the electronic signature box, I am stating that I understand what is being asked of me and I give my full consent to participate in the study.			
Signature of Study Participant <input type="checkbox"/> <i>Electronic signature</i>		Date	
Print Name of Study Participant			
Signature of Parent or Guardian (if applicable) <input type="checkbox"/> <i>Electronic Signature</i>		Date	
Print Name of Parent or Guardian (if applicable)			
Signature of Researcher <input type="checkbox"/> <i>Electronic signature*</i>		Date	
Print Name of Researcher			

*Electronic signatures certify that::

The signatory agrees that he or she is aware of the policies on research involving participants of the University of St. Thomas and will safeguard the rights, dignity and privacy of all participants.

- The information provided in this form is true and accurate.
- The principal investigator will seek and obtain prior approval from the UST IRB office for any substantive modification in the proposal, including but not limited to changes in cooperating investigators/agencies as well as changes in procedures.
- Unexpected or otherwise significant adverse events in the course of this study which may affect the risks and benefits to participation will be reported in writing to the UST IRB office and to the subjects.
- The research will not be initiated and subjects cannot be recruited until final approval is granted.

Appendix B Interview Questions

Interview Questions

1. What is your educational background?
2. What trainings relevant to DC: 0-3R have you attended?
3. When did you begin using DC: 0-3R?
4. How much of a focus is DC: 0-3R in informing your practice?
5. How old are the children you assess using DC: 0-3R?
6. What is your training and experience in child development prior to using DC: 0-3R?
7. DC: 0-3R focuses on child development as a consideration in the assessment process. What developmental markers do you look for in an assessment?
8. How do you determine which variations in development are significant?
9. One critique of DC: 0-3R is that infants and toddlers are not able to communicate. What is your response to this?
10. What do you look for in the caregiver/child relationship?
11. Tell me about the assessment process.
 1. Who is present?
 2. Where do you do the assessment?
 3. How many meetings are there to complete an assessment?
12. What possible issues do you see in diagnosing and infant/toddler?
13. How do families or other adults in the child's life influence the process?

14. What do you emphasize about the assessment process when discussing the assessment process with the parent/caregiver?
15. What are the strengths of DC: 0-3R?
16. What are the limitations of DC: 0-3R?
17. What, if anything, would you change about DC: 0-3R?
18. For what reasons would DC: 0-3R be used instead of another diagnostic tool?
 19. Once you've completed the assessment process, how do you determine intervention?
20. Is there anything important I did not ask or that you would like to add?